

What is claimed is:

- 1           1.     An isolated nucleic acid molecule selected from the group consisting of:
- 2           a)     a nucleic acid molecule comprising a nucleotide sequence which is at least
- 3     70% identical to the nucleotide sequence of SEQ ID NO:1, 3, 11, or 13;
- 4           b)     a nucleic acid molecule comprising a fragment of at least 311 nucleotides of
- 5     the nucleotide sequence of SEQ ID NO:1, 3, 11, or 13;
- 6           c)     a nucleic acid molecule which encodes a polypeptide comprising the amino
- 7     acid sequence of SEQ ID NO:2 or 12;
- 8           d)     a nucleic acid molecule which encodes a fragment of a polypeptide
- 9     comprising the amino acid sequence of SEQ ID NO:2 or 12, wherein the fragment
- 10    comprises at least 15 contiguous amino acids of SEQ ID NO: 2 or 12; and
- 11          e)     a nucleic acid molecule which encodes a naturally occurring allelic variant of
- 12    a polypeptide comprising the amino acid sequence of SEQ ID NO:2 or 12, wherein the
- 13    nucleic acid molecule hybridizes to a nucleic acid molecule comprising SEQ ID NO:1, 3,
- 14    11, or 13, or a complement thereof, under stringent conditions.

- 1           2.     The isolated nucleic acid molecule of claim 1, which is selected from the
- 2     group consisting of:
- 3           a)     a nucleic acid comprising the nucleotide sequence of SEQ ID NO:1, 3, 11, or
- 4     13; and
- 5           b)     a nucleic acid molecule which encodes a polypeptide comprising the amino
- 6     acid sequence of SEQ ID NO:2 or 12.

- 1           3.     The nucleic acid molecule of claim 1 further comprising a vector nucleic acid
- 2     sequence.

- 1           4.     The nucleic acid molecule of claim 1 further comprising a nucleic acid
- 2     sequence encoding a heterologous polypeptide.

- 1           5.     A host cell which contains the nucleic acid molecule of claim 1.

- 1           6.     The host cell of claim 5 which is a mammalian host cell.

1           7.     A non-human mammalian host cell containing the nucleic acid molecule of  
2           claim 1.

1           8.     An isolated polypeptide selected from the group consisting of:

2           a)     a polypeptide which is encoded by a nucleic acid molecule comprising a  
3           nucleotide sequence which is at least 70% identical to a nucleic acid comprising the  
4           nucleotide sequence of SEQ ID NO:1, 3, 11, or 13;

5           b)     a naturally occurring allelic variant of a polypeptide comprising the amino  
6           acid sequence of SEQ ID NO:2, wherein the polypeptide is encoded by a nucleic acid  
7           molecule which hybridizes to a nucleic acid molecule comprising SEQ ID NO:1, 3, 11, or  
8           13, or a complement thereof under stringent conditions; and

9           c)     a fragment of a polypeptide comprising the amino acid sequence of SEQ ID  
10          NO:2 or 12, wherein the fragment comprises at least 15 contiguous amino acids of SEQ ID  
11          NO:2 or 12.

1           9.     The isolated polypeptide of claim 8 comprising the amino acid sequence of  
2           SEQ ID NO:2 or 12.

1           10.    The polypeptide of claim 8 further comprising a heterologous amino acid  
2           sequence.

1           11.    An antibody which selectively binds to a polypeptide of claim 8.

1           12.    A method for producing a polypeptide selected from the group consisting of:

2           a)     a polypeptide comprising the amino acid sequence of SEQ ID NO:2 or 12;

3           b)     a polypeptide comprising a fragment of the amino acid sequence of SEQ ID  
4           NO:2 or 12, wherein the fragment comprises at least 15 contiguous amino acids of SEQ ID  
5           NO:2 or 12; and

6           c)     a naturally occurring allelic variant of a polypeptide comprising the amino  
7           acid sequence of SEQ ID NO:2 or 12, wherein the polypeptide is encoded by a nucleic acid  
8           molecule which hybridizes to a nucleic acid molecule comprising SEQ ID NO:1, 3, 11, or  
9           13, or a complement thereof under stringent conditions;

10 the method, comprising culturing the host cell of claim 5 under conditions in which  
11 the nucleic acid molecule is expressed.

1 13. A method for detecting the presence of a polypeptide of claim 8 in a sample,  
2 comprising:

- 3 a) contacting the sample with a compound which selectively binds to a  
4 polypeptide of claim 8; and  
5 b) determining whether the compound binds to the polypeptide in the sample.

1 14. The method of claim 13, wherein the compound which binds to the  
2 polypeptide is an antibody.

1 15. A kit comprising a compound which selectively binds to a polypeptide of  
2 claim 8 and instructions for use.

1 16. A method for detecting the presence of a nucleic acid molecule of claim 1 in  
2 a sample, comprising the steps of:

- 3 a) contacting the sample with a nucleic acid probe or primer which selectively  
4 hybridizes to the nucleic acid molecule; and  
5 b) determining whether the nucleic acid probe or primer binds to a nucleic acid  
6 molecule in the sample.

1 17. The method of claim 16, wherein the sample comprises mRNA molecules  
2 and is contacted with a nucleic acid probe.

1 18. A kit comprising a compound which selectively hybridizes to a nucleic acid  
2 molecule of claim 1 and instructions for use.

1 19. A method for identifying a compound which binds to a polypeptide of claim  
2 8 comprising the steps of:

- 3 a) contacting a polypeptide, or a cell expressing a polypeptide of claim 8 with a  
4 test compound; and  
5 b) determining whether the polypeptide binds to the test compound.

1        20.    The method of claim 19, wherein the binding of the test compound to the  
2        polypeptide is detected by a method selected from the group consisting of:

- 3        a)     detection of binding by direct detecting of test compound/polypeptide  
4        binding;  
5        b)     detection of binding using a competition binding assay;  
6        c)     detection of binding using an assay for 14094-mediated proteolysis.

1        21.    A method for modulating the activity of a polypeptide of claim 8 comprising  
2        contacting a polypeptide or a cell expressing a polypeptide of claim 8 with a  
3        compound which binds to the polypeptide in a sufficient concentration to modulate  
4        the activity of the polypeptide.

1        22.    A method for identifying a compound which modulates the activity of a  
2        polypeptide of claim 8, comprising:  
3        a)     contacting a polypeptide of claim 8 with a test compound; and  
4        determining the effect of the test compound on the activity of the polypeptide to thereby  
5        identify a compound which modulates the activity of the polypeptide.

1        23.    A method of inhibiting proliferation, or inducing the killing, of a 14094-  
2        expressing hyperproliferative cell, comprising contacting the hyperproliferative cell  
3        with a compound that modulates the activity or expression of a polypeptide of claim  
4        8, in an amount which is effective to reduce or inhibit the proliferation of, or induce  
5        the killing of, the hyperproliferative cell.

1        24.    The method of claim 23, wherein the compound is selected from the group  
2        consisting of a peptide, a phosphopeptide, a small organic molecule, a small  
3        inorganic molecule and an antibody.

1        25.    The method of claim 23, wherein the compound is an antibody conjugated to  
2        a therapeutic moiety selected from the group consisting of a cytotoxin, a cytotoxic  
3        agent and a radioactive metal ion.

- 1 26. The method of claim 23, wherein the compound is administered in  
2 combination with a cytotoxic agent.
- 1 27. A method of inhibiting proliferation, or inducing the killing, of a 14094-  
2 expressing hyperproliferative cell, comprising contacting the hyperproliferative cell  
3 with a compound that modulates the activity or expression of a nucleic acid molecule  
4 of claim 1, in an amount which is effective to reduce or inhibit the proliferation of, or  
5 induce the killing of, the hyperproliferative cell.
- 1 28. The method of claim 27, wherein the compound is an antisense, a ribozyme,  
2 or a triple helix molecule.
- 1 29. The method of claim 23, wherein the hyperproliferative cell is found in a  
2 solid tumor, a soft tissue tumor, or a metastatic lesion.
- 1 30. The method of claim 23, wherein the hyperproliferative cell is found in a  
2 cancer selected from the group consisting of a sarcoma, a carcinoma, and an  
3 adenocarcinoma.
- 1 31. The method of claim 23, wherein the hyperproliferative cell is found in a  
2 cancer selected from the group consisting of lung cancer, breast cancer, ovarian  
3 cancer, liver cancer, and colon cancer.
- 1 32. A method of treating or preventing a disorder characterized by aberrant  
2 cellular proliferation or differentiation of a 14094-expressing cell, in a subject,  
3 comprising:  
4 administering to the subject an effective amount of a compound that modulates the  
5 activity or expression of a polypeptide of claim 8; such that the aberrant cellular  
6 proliferation or differentiation of the 14094-expressing cell is reduced or inhibited.
- 1 33. A method of treating or preventing a disorder characterized by aberrant  
2 cellular proliferation or differentiation of a 14094-expressing cell, in a subject,  
3 comprising:

4 administering to the subject an effective amount of a compound that modulates the  
5 activity or expression of a nucleic acid molecule of claim 1; such that the aberrant cellular  
6 proliferation or differentiation of the 14094-expressing cell is reduced or inhibited.

1 34. The method of either of claim 32, wherein the disorder is a cancer.

1 35. The method of claim 34, wherein the cancer is a solid tumor, a soft tissue  
2 tumor, or a metastatic lesion.

1 36. The method of claim 34, wherein the cancer is selected from the group  
2 consisting of a sarcoma, a carcinoma, and an adenocarcinoma.

1 37. The method of claim 32, wherein the disorder is selected from the group  
2 consisting of lung cancer, breast cancer, and colon cancer.

1 38. The method of claim 32, wherein the subject is a mammal.

1 39. The method of claim 32, wherein the subject is a human.

1 40. The method of claim 32, wherein the compound is selected from the group  
2 consisting of a peptide, a phosphopeptide, a small organic molecule, a small  
3 inorganic molecule and an antibody.

1 41. The method of claim 32, wherein the compound is an antibody conjugated to  
2 a therapeutic moiety selected from the group consisting of a cytotoxin, a cytotoxic  
3 agent and a radioactive metal ion.

1 42. The method of claim 32, wherein the compound is administered in  
2 combination with a cytotoxic agent.

1 43. The method of claim 42, wherein the cytotoxic agent is selected from the  
2 group consisting of an antimicrotubule agent, a topoisomerase I inhibitor, a  
3 topoisomerase II inhibitor, an antimetabolite, a mitotic inhibitor, an alkylating agent,  
4 an intercalating agent, an agent capable of interfering with a signal transduction  
5 pathway, an agent that promotes apoptosis or necrosis, and radiation.

1 44. The method of claim 13, wherein the sample comprises a cancer cell or  
2 tissue.

1 45. The method of claim 16, wherein the sample comprises a cancer cell or  
2 tissue.

1 46. The method of claim 44, wherein the cancer is a solid tumor, a soft tissue  
2 tumor, or a metastatic lesion.

1 47. The method of claim 45, wherein the cancer is a solid tumor, a soft tissue  
2 tumor, or a metastatic lesion.

1 48. The method of claim 44, wherein the cancer is selected from the group  
2 consisting of a sarcoma, a carcinoma, and an adenocarcinoma.

1 49. The method of claim 45, wherein the cancer is selected from the group  
2 consisting of a sarcoma, a carcinoma, and an adenocarcinoma.

1 50. The method of claim 44, wherein the cancer is selected from the group  
2 consisting of lung cancer, breast cancer, ovarian cancer, liver cancer, and colon  
3 cancer.

1 51. The method of claim 45, wherein the cancer is selected from the group  
2 consisting of lung cancer, breast cancer, ovarian cancer, liver cancer, and colon cancer.

1 52. A method for evaluating the efficacy of a treatment of a proliferative  
2 disorder, in a subject, comprising:  
3 treating a subject with a protocol under evaluation;  
4 evaluating the expression of a 14094 nucleic acid or polypeptide,  
5 wherein a change in the level of 14094 nucleic acid or polypeptide after treatment,  
6 relative to the level of expression before treatment, is indicative of the efficacy of the  
7 treatment of the disorder.

- 1 53. The method of claim 52 wherein the proliferative disorder is a cancer of the  
2 lung, breast, ovary, liver, and colon.